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The Michigan Convention.

As announced in the BEE JOURNAL, we attended the State Convention of the bee-keepers in Michigan, held at Kalamazoo last week, a report of which may be found in this issue of the BEE JOURNAL.

The convention was well attended, considering the extremely disagreeable weather that prevailed during the two days when its sessions were held.

The Michigan State Bee-Keepers' Association is the oldest in America, and we are pleased to say that it has been among the first to realize the importance of appointing a committee for the purpose of conferring with the officers of the State Fair relative to giving the bee-keeping interests their due share of attention and prominence at the Fair. This was done last year, as was duly noted in the report of the proceedings published in the BEE JOURNAL last December, and the results were very flattering indeed. The display was very creditable, and the officers of the State Fair were so well pleased with the attention it attracted from those in attendance at the Fair, that they say, anything in reason in the shape of accommodations and premiums demanded by the bee-keepers for the coming State Fair, will be granted.

The present Secretary, Mr. H. D. Cutting, was the chairman of the committee, and the results show what can be accomplished by one man, when thoroughly in earnest. He was supported but very little by the rest of the committee, except by encouraging words, and acted almost alone in the matter. He now has the satisfaction

of knowing that his labors were not only crowned with success, but they were duly appreciated by the Bee-Keepers' Association. We hope that the next Fair will have a far greater exhibit, larger premiums and a more suitable building and location on the Fair grounds.

Let this stimulate Associations all over the land to exertion in a similar way and thus aid in popularizing the demand for honey, as well as giving general information in regard to bees and honey to all who may attend the Fairs for 1883.

In the last number we enclosed a blank, to be used in sending on subscriptions for 1883. Very many run out with the present year, and by renewing at once, it will save us much labor in taking the names in type from the subscription list, and then, that of returning them a few days after. We hope all, who can, will send on their renewals immediately and save any errors that might occur during the rush at the end of this month, in the holidays. May we ask you, reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on at least one new subscription with your own? Our premium, "Bees and Honey," in cloth, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

Attention is called to a few changes in our clubbing list for 1883, as given on page 797. Those interested will please take notice.

The Bee-Keepers' Magazine is to have a Poultry department for 1883, and the price will be \$1.25 a year. Issued monthly by King, Keith & Co.

Planting Sweet Clover.

Dr. R. W. Keene, Versailles, Ky., writes us as follows:

I desire a sure way to get a good stand of sweet clover? I have been sowing it for three years, have tried all seasons and every plan, and it does not come up for me. I sowed about ten acres last fall and spring, in different places, and I think $\frac{1}{4}$ of an acre would cover the whole of it now, that is worth anything. How will it do to sow it on rye this winter? I thought I would sow four pounds of alsike and two pounds of sweet clover to the acre, on ten acres of rye that I have. How will that do? It does not grow worth a cent on poor clay land for me, and now, I will try it on good land. Our honey crop was almost nothing the past season. I obtained 1200 pounds from 43 colonies, spring count, and increased to 80 colonies. Bees in good condition for winter, and I hope, from the present abundance of white clover, to have a good harvest for 1883.

We are astonished at the statement made by Dr. Keene. We have had no experience in sowing it as a field plant, having a large amount of it growing spontaneously over scores of acres near our residence. We are able only to give the experience of others. Sand is said to be best for it. Prof. Cook says that it grows luxuriantly on sandy soil, and it is generally reported to do well on any kind of soil, and in every climate.

Prof. C. E. Thorne, of the Ohio State University, thus testifies regarding its value as a field plant: "It will grow luxuriantly in hard, poor clay, where even white clover will scarcely live at all, and grows much more rapidly than red clover in any soil, while in the soils that are, as is said, 'clover-sick,' it thrives as well as anywhere. It is a good forage plant for bees and for cattle, and is well adapted for soiling, as it makes a growth of four to six feet during the season, and is said to bear two or three cuttings. A German analysis gives its hay a feeding value of fifteen dollars per ton as against sixteen dollars and twenty-eight cents for very good red clover hay. While red clover, upon which our farming in many sections, and especially in clay lands, depends so essentially for crops of grain, is becoming more and more uncertain. It would seem to be worth while to try this 'fast weed' as a resource for recuperative green manuring, in heavy soils especially."

But its greatest recommendation for the general bee-keeper is the fact that it requires no especial cultivation, thus making it particularly desirable

for roadsides and commons. Being a biennial, the seeds possess great vitality, and may be kept over for a long time, and scattered, a handful at a time, as opportunity offers, or a bare place develops itself. Where possible to devote even a limited time to its cultivation, the ground may be plowed and the seed lightly harrowed under in the fall with winter wheat, or planted with barley; or in early spring it can be sown with wheat, oats or rye, without detriment to the grain. If wanted, however, in its greatest perfection, it should be planted in drills four feet apart, and once hilled up with the cultivator. Sweet clover blooms and yields nectar continuously in this latitude from about June 10th till Aug. 1st, when the first seed crop matures, which is succeeded with a new foliage and profuse second bloom about Aug. 15th, and this continues till winter sets in. If a part of the field be mown about July 1st, it will bloom and yield nectar, except when rains are falling or during the prevalence of strong, adverse winds, from the middle of June till past the middle of October—certainly as long a period as our impatient little workers can utilize it; nor will it then cease to "waste its sweetness on the desert air," but, after the advent of winter, when all else has passed into "the sere and yellow leaf," its modest flowers will waft a fragrant good-bye to the bees on their last flight, and leave pleasant memories for their long winter dreams.

H. S. Hackman, of Peru, Ill., commenced the season of 1881 with 10 colonies, which he increased to 70, and obtained 1,200 pounds of surplus honey—1,000 pounds of extracted and 200 of comb honey—equal to 120 pounds per colony, spring count, and an increase to over seven colonies from one! Mr. Hackman, who is an experienced bee-keeper, and whose veracity is unquestionable, writes: "Please find inclosed flowers of the sweet clover, picked from the roadside, on the prairie, yesterday, Nov. 14. I suppose I owe my wonderful summer success largely to the sweet clover. We had the hottest and driest season we ever had—no rain from June 15th until Sept. 15th. The hotter and drier the more honey, seemingly. Sweet clover, as a weed! Although it has been growing in our roads, on waste land, along railroads, and on our hillsides for twenty-five years, it does not seem to get into the fields, except where water has carried the seeds into low places."

Sagacity of Bees.

An English *Journal*, in 1841, gave the following item on this subject:

A few pounds of honey were taken from a hive (about six miles from London) and placed in a closet, under lock and key. The windows of the room having been left open, the bees obtained admission, and, entering the closet under the door, removed the whole of the honey. The cells of wax were left entire and the honey was conveyed to the central division of the hive, where it was safely deposited during the day. It is evident that spies must have been employed to observe where the honey was placed, and that as soon as the information was communicated to the hive, they took this vigorous measure for the recovery of their stolen property. It is remarkable that they should have succeeded so completely, and in so short a time, since the closet was entirely dark and they could only enter by a crevice under the door.

This circumstance is by no means proof that the bees had sent out spies, who discovered the stolen honey and informed their comrades of its whereabouts. When there is no honey to be obtained from the flowers, bees will go in where any open door, crack, or crevice large enough presents itself, in search of sweets, and if there is any honey to be found, their sense of smell is strong enough to find it; and when one has found it others will follow, in hope of obtaining some of the treasure.



MISCELLANEOUS.

Packing Bees in Chaff.—Mr. F. O. Addition, Dexter, Me., writes as follows, to the *Home Farm*:

For the average bee-keeper I think wintering on the summer stand with proper protection the safest way. My method is this: Take a box large enough to give from four to six inches space around the hive except on the front, that should be two inches. Make a spout from the entrance of the hive through the box for the free passage of the bees at any time. Remove the cap from the hive, spread a piece of burlap or other porous material over the frames, then pack the space around the hive with dry sawdust or wheat chaff, with a foot on top directly on the cloth. Then put on a tight cover and the bees are in a good place to withstand the long, cold winters of Maine. I have known two quarts of bees to be wintered with success in this way. The bees should first be confined to as few frames as will give them sufficient stores, using a chaff division board.

American Honey in England.—The *London Grocers' Journal* of Nov. 17, 1882, contains the following on the above subject:

California ranks first among the honey-producing States of the Union. The soft and equable climate, in which wild flowers of every variety are in bloom for seven or eight months in the year, makes her peculiarly the home of the bee. Even before the building of the Pacific railway the production of her apiaries was enormous, and the honey market was glutted.

On the opening of the road, Mr. W. M. Hoge began to transport honey from the Pacific to the Atlantic coast, taking it to New York in barrels, selling it to the retailers, and thus finding a good market.

It was not until 1878 that the problem of safely bringing honey in the comb from California to England was satisfactorily solved. The infinite care and judgment demanded in the transportation of a cargo, and the extreme liability of breakage from the breaking away of the comb, from its bruising through the slightest jolting of the railway vans, were considered insurmountable difficulties.

Mr. Hoge, whose name is so well known in connection with honey, both here and in America, and of whom the *AMERICAN BEE JOURNAL* once said, "To Mr. Hoge, more than to any other man living, is America indebted for developing the great demand for American honey in Europe, as well as greatly enlarging the call for it at home. In saying this we but accord him that credit which is his honest due," overcame these difficulties, and showed that the transit of honey in the comb could be made as successfully as a cargo of tea.

In 1878, Mr. Hoge successfully landed in Liverpool 80 tons of comb honey, and, early in 1879, another cargo of 100 tons in London. Since these pioneer importations the sale of American honey in Europe has been unflagging.

In the extreme southwestern corner of the United States there is a narrow strip of country known as the bee belt of California. The hillsides are covered with a growth of stunted brushwood, from which springs a luxuriant growth of white sumac and other flowering shrubs, which bloom there nine months of the year—our honey season in England does not last that many weeks. There are no less than three hundred apiaries of several hives each along the "Bee Belt."

The California bee season, Mr. Hoge says, begins by February 1. In March or April the bees swarm, and the bee culturist has lively times saving his swarms.

The science has become so systematized now that the apiculturist knows within a day or two when a given colony may be expected to swarm, and as the young bees always settle somewhere near the parent hive at least once before selecting their new quarters, a swarm is seldom lost. The flowers are at the height of their luxuriance in May and June, and the taking of honey is begun usually about

May 20, and the bees are kept at work as long as the flowers last. They cease to yield more than a sufficient quantity than to subsist the bees, in the early part of August, but the little workers are able to find enough to live on without consuming their stores, as late as October. After October begins, although the air is still mild and spring-like, the bees cease to work and retire into a semi-dormant condition. Once every eight or ten days, a colony will turn out at midday and fly around for an hour or two in the sunshine, but they never fly far from home, and are never seen at work. The food of the bees in the bee belt is generally the flower of the white sage, a plant that closely resembles the garden sage, but must not be confounded with the wormwood species, and has not the family bitterness. Next to the sage in importance as bee food is the sumac. There is no poisonous flowering plants in the bee range, and the honey has none of the colicky qualities that make the honey from semi-savage countries so objectionable.

Mr. Hoge, whose headquarters in England are at "The Apiary," in Leconfield-road, London, represents some of the largest American bee-keepers, and speaks encouragingly of the future prospects of the honey trade in this country.

Have Bees a Language?—A clergyman writes to the *British Bee Journal* the following incident, as proof that bees have a language:

On Ascension Day, 18th of May, just as my church bells began ringing for service I took a walk round my apiary, the sun was shining beautifully and the weather in every way lovely. A hive which about a week before I had fitted with comb foundation, ready for the next swarm, attracted my attention, for there were hundreds of bees flying about it and going in and out of it. I concluded, therefore, that probably a swarm was coming to it. I watched the bees carefully—ten minutes later there was scarcely a bee to be seen near it. I pretty well knew then what was coming. I kept a pretty full lookout all round when all of a sudden a roar of bees was heard in the distance, getting louder and louder; over the roof of my cottage they came, and straight over the hive where a quarter of an hour before I had seen several hundred of reconnoiterers. They wheeled high up in the air almost out of sight, and then down they came like a water-spout, covering the whole roof of the hive, legs, alighting-board, and a good space of the ground. Now, sir, who can doubt but that the bees forming the reconnoitering party left the hive together in order to pilot the others on? There was apparently no reason why they should so suddenly have left unless it were because the sun was out the whole time, and the air beautifully warm. After I came out of church I found the bees working briskly in their new home. I then went in search of the owner, and soon found out they had come from a hive about half a

mile off, the man failed to keep up with them, and so lost sight of them. Now, sir, here is a proof that bees like comb foundation, and do you not think it a proof that they have a language too?

The Honey Production of To-Day.—The *German Town Telegraph* gives this description of the honey of to-day, as compared with that of yore:

The honey culture, in fact, is a science, and should inspire in those who pursue it a love for it outside of the profit account, and in this case the enjoyment which it imparts must be considered as a part, and a very desirable part of the returns.

The improved hives, which have taken the place of the old, cumbersome ones that were so awkward in handling and failed to yield an equal supply of honey when compared to these re-modeled ones, makes the care of bee-keeping much easier and pleasanter. The small sections, each holding one or two pounds of honey, which go with their disposal, make the article much more salable than formerly, though they require careful handling. The bees have a way of hermetically sealing the combs, and if these are kept intact, the contents will remain undiminished in quantity and unimpaired in quality. If, however, the combs become cracked for want of care in packing, handling and transporting, the sweet store crystallizes and becomes opaque and unmarketable, though not very materially injured. Altogether, with due care and a proper management of this beautiful and interesting branch of domestic industry, the apiary should be found upon a dozen farms where it is now found only upon one.

Providing Pasturage for Bees.—The *Indiana Farmer* makes the following very sensible remarks on the subject:

Planting for honey has ceased to be an experiment, and is sure to be one of the certainties of success in modern bee-culture. Situated as we are we feel very perceptibly the several regular honey drouths, as any lack of the nectar flow in the several regular honey-producing plants. We have not had the time or room for extensive experiments in this line, but have watched closely those made by our friends and neighbors. And we note the fact that the best and most progressive bee-keepers of America as well as those of the Old World have decided it a success. Sweet clover, (melilot) is probably at the head of all special honey-producing plants for planting, under all conditions and circumstances, and we noticed, even up to middle of November, the bees working, on a few scattered flowers of this plant in protected places.

Figwort is a decided favorite and has some advantages as it does not die out, but grows from the root year after year. Spider plant is another. J. Lammey, Bateham, Ind., says in a letter to us Oct. 15: "The spider plant seed I got of you last spring was a de-

cided success. It began blooming July 1, is in bloom yet, and to see the bees on it of a morning would delight the heart of any bee-man." In planting sweet clover we notice that sown in the fall and winter does the best, and we conclude the cold of winter to be of some benefit to the seed thus sown. A united effort of the many bee-keepers would soon produce a flora in the land of uncalculable worth.



For the American Bee Journal.

Golden Willow as a Honey Producer.

E. B. BEEBEE.

As a great deal depends on the strength of our colonies when the main honey harvest commences, perhaps it is well for us to look closely to what makes them so.

As I have had bees for some time in localities where there was no willow, and at the same time had others where there was plenty of willow, I think I can tell something about its value to bees.

As soon as this willow begins to bloom, which is about the last of April, our bees commence to work in good earnest; and if we had as fine weather for bees to work as we have in July, I think they would gather almost as much honey from it as they do from basswood. As far as my observations extend, I think they gather more honey from willow than from apple blossoms, and we have plenty of both. A bee-keeper came to my apiary when willow was in bloom and was astonished to find that my bees did not rob, when he saw a hive of frames full of honey exposed in the apiary; and when I called his attention to the bees working on the willow he thought he never saw bees work busier.

The quality and flavor of the honey is very poor. Although it is not as dark as some, it has a very repugnant and inferior flavor, but I cannot see but that they build up and breed just as fast on it as on any other, and that is just what we want at this season. Aside from this, we have the advantage of knowing there is no robbing going on at this most critical time; as with our bees in the locality where there is no willow, they have to be closely watched and the entrances contracted, especially if there is work to be done which requires opening the hives; we also find there is a vast difference in the strength and condition of the colonies in these two locations, say about the last of May.

I do not wish to compare willow as equal to basswood or any of the main honey plants, but, coming as it does first in the spring, it is of much value as it has the double advantage of stimulating the bees to breed and keep them from robbing and spring dwindling.

I know of no tree or shrub that is as easily propagated as this willow; it will grow anywhere without any care or cultivation, wet or swampy locations being preferable, and it does not spread any more than as it is set out or planted. It also makes a fine shade tree, being handsome for lawns, yards or walks. It is a very rapid and thrifty grower; a cutting set out in the spring will make a good sized tree in four years. There are three varieties



The Willow.

of willow in this vicinity, but the golden or yellow willow is far preferable for the bees, as the others yield but little honey compared to this one. Oneida, N. Y., Nov. 27, 1882.

For the American Bee Journal.

The Rearing of Cheap Queens.

G. M. DOOLITTLE.

EDITOR BEE JOURNAL: The following article I wrote for the *Rural New Yorker* but thinking it may be interesting to the readers of the BEE JOURNAL, I should be glad to see it in its valuable columns:

The great Creator of all things pronounced his work good when he rested from the same, and so it came to pass that it was good for bees to multiply and increase by natural swarming. In the preparation for this, the first work is the laying of eggs in the drone cells which are already built; or if no drone comb is in hive, some is built, or worker comb is cut down and drone comb substituted for the purpose of producing drones, or male bees. Next, large acorn-cup-like cells are built for a royal cradle for the young queen, in which in due time the reigning queen deposits an egg intended for a queen. At about the time this egg hatches, a copious supply of food is placed in this large cell for the royal larva to feed upon, and as it grows more food is given, till it actually floats in a sea of food—so much so that I have repeatedly seen a lump of uneaten food larger than a marrowfat pea left in the bottom of the cell after the queen had emerged therefrom. Another thing which is always noticeable is that this food is prepared and queens

reared when forage (both honey and pollen) is abundant, and at no other time do we expect natural swarms.

Again, there is a hiveful of bees of all ages, from the nurse bees which prepare this food to the aged veteran with wings tattered and torn with the labors of the field. Thus, with prosperity on every side, the highest queens of the highest type are raised. Now, if such queens as the above were reared and sold for a "dollar," or one dozen of them for \$9, the cheap queen controversy would have had no existence. In the course of time, it was ascertained that by removing the queen from the hive the bees could convert the larva hatching from an egg intended for a worker bee into a queen by building a queen cell over a worker cell and supplying the same with royal jelly, the food of the queen larva. Thus queens without number could be reared at the pleasure of the apiarist, either during the season of natural swarming or at any other time of the year when there were eggs and larvae in the hive. All went well for a time, but after a while it began to be whispered by our most practical apiarists that such queens were tending toward depreciating the quality of our bees; so it was proposed that, as a remedy, all queens should be reared as nearly as possible under the same conditions as those reared by natural swarming. Others claimed that such talk was nonsense, and still continued on as before. At about this time I was greatly excited over the bee question, and so to accomplish the most in the least time, I took to rearing queens "artificially," as this process was termed at that time. All seemed to go well the first season, and I was about to decide against our practical bee men, and say such queens were as good as any, although I invariably found that such queens were much smaller than those reared in natural swarming, and after the queen emerged from the cell not a bit of food remained, but the cell was licked as dry as any drone or worker ever licked its cell.

The next season queens were reared in the same way, although I saw quite a perceptible difference in the working qualities of my bees, but I was not fully convinced of my mistake till through the next winter and spring over two-thirds of my queens reared the season previous, died of old age, while queens reared by natural swarming lived from three to five years. Fully convinced that such queens were not as good as any, I have, as far as possible since that time, had all my queens reared from cells produced during natural swarming.

Soon after this it was proposed by a certain man, prominent before the bee-keeping world, that queens should be sent out and sold as soon as they were found to be laying, without any guarantee of any sort, and that the price be one dollar. Heretofore none but tested queens had been sold, and as the price had been from three to ten dollars each, fair queens had been the rule, for at these prices pains could be taken to rear queens as good as possible by any process except nat-

ural swarming. As the public had demanded this for tested queens, but few of a low grade as to prolificness and short life were sent out. Many opposed this untested dollar-queen business, but as the people demanded something "cheap," the business grew to large proportions. Those receiving queens which were dead were not satisfied with no guarantee, and demanded that such loss should be made good. Thus one claim after another was made till we have to-day queens advertised at 90c. each, or nine dollars a dozen, safe arrival guaranteed. As a result of all this we soon hear our prominent "dollar-queen" man saying that the way to rear good "dollar queens" was to take a comb containing eggs from your best colony, place it in an empty hive, then set it in the place of another colony and the returning bees from the field will raise good queens. Thus these old bees, long unused to preparing food for feeding larvae, are forced to do the best they can at queen-rearing, in season or out of season to meet this increasing demand for cheap queens.

Another, crying "Headquarters for Dollar Queens," says about Aug. 20th, "now is the time to rear good queens cheaply." Upon inquiry it is found that small nucleus boxes 5x6 inches square are used with a little handful of bees which are compelled to rear queens at a time when the bees should be preparing for their winter repose. Is it any wonder that a party writes, "out of nine dollar queens purchased, seven did not live six months and only one of them a year?" Another says: "I am disgusted with this dollar queen business; five out of six purchased this season, died of old age." In this controversy about cheap queens, talk about the dishonesty of the parties has had a prominent place, as if there was not room for dishonesty outside of the queen business. The question is not as regards honesty or dishonesty, but it is regarding a traffic which demands such a scrimping and pinching on every side in order to live, that the quality of our bees is liable to be injured for all future time.

Talk about queens reared as above being as good as those reared by natural swarming! No one really believes such a thing. But says our worthy friend W. Z. Hutchinson, in the *Rural* for July 16, "You say that Mr. Doolittle 'evidently sees and feels deeply the tendency of the cheap queen traffic to depreciate the quality of our bees.' Judging from his writing he certainly does, but what are we to think of his rearing and advertising for sale 'dollar queens?' Actions sometimes speak louder than words!" For some reason or other Mr. H. forgot to say that such queens were reared under protest by myself. Merchants often keep goods they do not approve of because the demand calls for them, and they must keep them or lose customers. This is why I sell "dollar queens" and probably no one knows it better than does Mr. H.

When changing a postoffice address, mention the *old* as well as the new address.

For the American Bee Journal.

Mating of a Queen Bee.

S. A. SHUCK.

On the 10th of July, having some queens that had been kept confined for the purpose, about 2:30 p. m. I liberated, before an open window, a very strong and active one, five days old, and proceeded to loop a silk thread around her waist. After many fruitless efforts I succeeded in doing so. The thread was attached to a pole about 18 feet long, the thread being about 10 feet long. I carried her to the apiary, and hoisted the pole, allowing her to swing at the end of the thread, or fly as far as the thread would permit. A stiff breeze was blowing, but the weather was clear and warm, and drones were flying in great numbers. In less than a minute several drones were pursuing her and the number increased rapidly, until there were, perhaps, fifty, when, for some reason, they all dispersed, like a flash. In a short time, perhaps, a few seconds, and, at times, a minute or more, they were again chasing her, and disappeared in a twinkling again.

This was kept up for some time, until I thought the queen needed some food and let her down and gave her some honey. This was repeated several times.

During the time the drones were chasing the queen, a great many caught her, one at a time, and would cling to her a few seconds and then let go. Finally, one caught her, and she appeared to have caught the thread with her front feet. They appeared to be face to face and for a few seconds only. The drone, letting loose his hold, swung head downward, and the instant he reached a straight line, his head in the opposite direction from that of the queen. Snap! Did you ever, in your boyhood days, pinch the ripe seed pods of the wild touch-me-not to hear them snap, and see the seeds cast in every direction? The above occurrence reminded me of these ripe seed pods, and the drone struck the grass near my feet, as if impelled by a force similar to that which casts these ripe seeds away.

The queen bore the evidence of her mating, but there was not that white thread-like appendage that we see in so many cases where the queen has just mated, but in this case the organ she held was large and appeared to be perfectly smooth, so I conclude that, in most cases, the drone is not so easily freed from the queen, as in this case.

Later in the season I tried to secure, in the same way, the mating of queens, with imperfect wings. The drones appeared, as before, but I failed to accomplish my undertaking.

The question now arises, have I gained any information leading to the successful mating of queens in confinement. This is what prompted me to make the above experiments. I had learned that others had mated queens in this way, but not one word have I seen in regard to the disposition of the drones in such experiments. During my last experiment the

weather was very still and pleasant and the actions of the drones were observed with more ease and more definite conclusions were formed concerning their natural actions. On such occasions they become very much excited, and notwithstanding their sudden fright and dispersal, occasioned by any unnatural turn or jerk of the queen, caused by her attachment to the thread, they may be seen several rods away and in different directions, chasing each other, and often, a dozen or more together, as though each suspected the other of chasing the queen. One of these little swarms, as it were, of drones, I saw come to the ground in chasing each other, and if there had been any virgin queen in the apiary, except the one I had attached to the thread, I should have thought they were in pursuit of her.

From my observations in these little experiments, I have concluded that any efforts to secure the mating of queens in small boxes, barrels or any like devices, will in the main, prove unsuccessful. However, it may be accomplished in a building covering several rods of ground, provided sufficient light can be given, and at the same time have sufficient shading to prevent the bees from striving to get out.

Bryant, Ill.

British Bee Journal.

Introducing Queens Without Encaging.

SAMUEL SIMMINS.

It is well known that a serious loss is occasioned to a colony of bees, especially in early spring, by the exchange of queens through the stranger being caged for 48 hours, on even a less time. The colony does not only lose the eggs that might have been produced during that time, but the sudden check imposed upon a full laying queen by being imprisoned, throws her back so much, that she does not recover her usual fecundity for some days. Imported queens will often not lay at all for the first few days; and the original sovereign having been deposited or destroyed the colony suffers the loss equivalent to an average swarm before the new arrival is in good order for laying.

This has been so strongly impressed upon my mind, that for a long time past I have been experimenting, in the hope that I might ultimately be enabled to dispense with the introducing cage entirely. I am happy to say that I have succeeded beyond my expectations, and the method is so simple that the only wonder is that I had not thought of it sooner. Colonies with fertile workers, or those that have been long queenless without brood (as they are sometimes found in early spring), cause me no trouble whatever, as I can give them a laying queen without her ceasing her work, except for the few moments that she is being transferred from one hive to another. When a queen is sold with a swarm, another can be immediately inserted, and the queen of one colony can be exchanged with that of another with-

out confinement and none of the bees of the respective colonies will know the difference.

It is generally known that the bees of one colony may be united with those of another by alternating their combs, and there is no disposition to fight. Having always succeeded in uniting them thus, I came to the conclusion that a queen on a comb with her own bees and brood, would be taken no more notice of than the others; and this I have proved to be the case by continued and unvarying success. Taken from one hive and placed in another, while parading among her own subjects and without being handled, the queen takes no notice whatever of the change, and thus her unconcerned behavior saves her from any rude inquisitiveness. I have introduced them under all the respective conditions before mentioned, by this means, and I have not met with a single failure; and during the last two seasons I have been saved a large amount of extra work by this method, besides a considerable gain in increase in bees. As soon as the comb, queen, and bees are inserted, the job is done, and I never trouble to look at the hive again until its turn comes in the ordinary course of manipulation.

The foregoing applies, of course, to queens reared in the same apiary when taken from nuclei or other hives with frames all of one size, as should be the case in every well conducted apiary. If a nucleus cannot afford to lose the comb of brood taken with the queen, it is easily replaced by one from some other colony. When queens come from other apiaries, the mode of procedure is slightly different, though a state of things somewhat similar has to be introduced. An imported queen will never lay vigorously for the first few days, therefore it might be said what delay would there be in encaging her? There would be considerable delay if the present laying queen were at once deposed.

To make the most of the queens, first secure as many combs of hatching brood as there are queens to be introduced, and after cleaning them of every bee, place each in a nucleus hive with a tight-fitting division board on either side, put the queens in, and close each so that no bees can get out, but give ample ventilation. Now put these nuclei into a moderately warm room for two or three days, when many young bees having hatched, and the queens nearly recovered from the effects of their previous confinement, each nucleus may be stood by the side of the hive its queen is to be introduced to, and the bees allowed to fly for a day or two before being united to the full colony. As soon as the imported queen is laying nicely on her one comb, the condemned queen can be removed and the former inserted (on her own comb with the bees) at one and the same operation, and no notice will be taken of her. By reserving the condemned queen till the moment the other is introduced, the colony receives no check whatever. The single comb is quite enough for the new arrival for nearly a week, as, after her long confinement, she is

some days before getting into full laying order. It will be observed that instead of the usual way of allowing the bees to find out their loss, the exchange is completed before they are aware of the occurrence.

I have no doubt many will still cling to the cage, but no advancing beekeeper can afford to lose so much valuable time at the beginning of the season. My experience bears me out in stating that there is absolutely no risk whatever in introducing in this way, even in what might be thought most obstinate cases.

For the American Bee Journal.

Honey Dew Explained.

C. H. LAKE.

Many of the old articles written 40 or 50 years ago, are very interesting to me, and thinking other readers of the Weekly BEE JOURNAL would be edified, I have made such extracts from them as I thought were worthy a place in your valuable journal. I quote one from the *American Agriculturist* of 1844, as follows:

"At a late meeting of the Farmers' Club, at New York, the subject under consideration being insects injurious to vegetation, the Chairman, Ben Johnson, of Long Island, is reported to have said: 'It is my opinion the dew (called, by the Dutch, honey dew) which always falls the latter part of June, always kills off most insects; they uniformly disappear after it has fallen.'"

"Now, since I have embraced the new doctrine of cause and effect in the matter of blight and its consequences, I am led to consider the honey dew merely the extravasated juices of the plant or tree, which, having been for a time in a stagnant and putrid state occasioned by unfriendly atmospherical influence, are at length thrown off by a new circulation of the sap, the effect being the deprivation of food to the insect tribe, which are created for the purpose of feeding on putricity, and hence the cause of their disappearance." (W. FAX, in *Boston Cultivator*.)

The editor of the *Agriculturist* adds: "We have consulted Mr. Browne, who is well versed in matters of this kind, and he regards honey dew, in most cases, as the exudation of plant lice. (*Aphides*.)"

"He says, however, that there are saccharine exudations from the leaves of plants and trees, which are not distinguished by the name of honey dew, as the labdanum from the *cestes creticus*, and the manna which exudes from the ash of Italy and the larch of France. There are also analogous productions observable on plants after very dry weather, which Mr. Murray, in his treatise on Atmospheric Electricity, ascribes to an electric change in the air. Mr. Murray also states 'that the honey dew was found on plants that were entirely free from plant lice, and so copious was this substance, that had their number been a hundred fold, they could not certainly have been the source of the supply.

He supposed that he set the question at rest by washing a leaf and wiping it dry with a sponge; immediately after which he observed, through a lens, that excreted globules were apparent."

But, in this experiment, might not the leaf have been previously wounded, perhaps, by the beak of a plant-louse, and hence the exudation of sap, instead of honey dew? And may not the circumstance of his finding the honey dew on leaves where there were no plant lice, be accounted for on the principle that these insects had left, as they always do, the parts covered with their exudations?

Mr. Sauvages, in the *Transactions of the Royal Society*, at Montpellier, remarks "that *aphia* (plant lice) are careful to eject the honey dew to a distance from the place where they may be feeding."

Mr. Burn cites an instance "of a plant of the Chinese chrysanthemum, the young shoots of which swarmed with aphides, and that the leaves below were covered with honey dew. The experiment was tried of wiping it off from a leaf, and no more was formed when it was protected by a piece of paper from the aphides above. Beside, the paper became sprinkled with honey dew in a few hours, and by means of a lens, the aphides were actually seen to eject their fluid."

Dr. Harris, in his report on "Insects of Massachusetts, describes the habits of these insects, as follows: "Plant-lice seem to love society, and often herd together in dense masses, each one remaining fixed to the plant by means of its long tubular beak, and they rarely change their places till they have exhausted the parts first attacked. The attitudes and manners of these little things are exceedingly amusing. When disturbed, like restive horses, they begin to kick and sprawl in the most ludicrous manner. They may be seen, at times, suspended by their beaks alone, and throwing up their legs, as if in a high frolic, but too much engaged in sucking to withdraw their beaks. As they take in great quantities of sap they would soon become gorged if they did not get rid of the superabundant fluid through the two little tubes or pores in the extremities of their bodies. When one of them gets running overfull, it seems to communicate its uneasy sensations by a kind of animal magnetism to the whole flock, upon which they all, with one accord, jerk upward their bodies and eject a shower of the homied fluid."

The fecundity of plant lice is almost incalculable. Reaumur supposed that in one year there may be twenty generations, and he proved, by experiment, that one of these insects may be the parent of 5,904,900,000 descendants during its life."

Latrille says, "one female, during the summer months, usually produces about twenty-five a day, and more than one thousand have been counted on a single leaf of the hop."

Honey dew is in no way regarded as poisonous, but, on the contrary, it is devoured with eagerness by bees, ants, and other insects, and in the forests

of Lithuania, this substance and linden flowers afford the finest honey in the world."

Baltimore, Md.

The Transformations of Life.

CHARLES J. BEATTIE.

Though living forces teem with living strife,
All Nature sings one song of deathless life.
Grass, flower, and shrub, and tree of every name—
All living things—a deathless life proclaim.
The tiny song-bird 'mid the boughs and leaves,
Builds its warm nest with skillful ease, and weaves
With bramble, twig, and leaf, its castle free—
A jocund homestead in the growing tree,
To keep its feathered darlings snug and warm,
Safe from the cold and sheltered from the storm.
The restless bee rears its industrious home,
And fills with treasured sweets its honey-comb—
The strange chrysalis that assumes to die,
Rises to life a gorgeous butterfly.
Night's radiant Queen, the everlasting Moon,
Changeful, yet changeless as eternal noon—
The lesser orbs which light the night or day,
The constellations of the Milky Way,
And every star that shines from pole to pole,
Are sentinels that watch the ages roll.
Chicago, November, 1882.



Local Convention Directory.

1883.	Time and Place of Meeting.
Jan. 9.—	Cortland Union, at Cortland, N. Y. M. C. Bean, Sec., McDrawville, N. Y.
9.—	Ohio State, at Columbus, Ohio. D. Spear, Sec., Cardington, Ohio.
9-11,	Northeastern, at Syracuse, N. Y. G. W. House, Fayetteville, N. Y.
11,	Nebraska State, at Wahoo, Neb. Geo. M. Hawley, Sec.
16.—	Eastern N. Y., at Albany, N. Y. E. Quakenbush, Sec., Barnerville, N. Y.
18,	Champlain Valley, at Middleburg, Vt. T. Brooks, Sec.
19, 20.—	Mahoning Valley, at Berlin Centre, O. L. Carson, Pres.
Feb. 3.—	Northern Ohio, at Norwalk, O.
8.—	Maine State, at Dexter. Wm. Hoyt, Sec.
April 5.—	Utah, at Salt Lake City. E. Stevenson, Sec.
May 11.—	Iowa Central, at Winterset. J. E. Pryor, Sec.
—,	—Texas State Convention, at McKinney. Dr. W. R. Howard, Sec.
Oct. 17, 18.—	Northwestern, at Chicago, Ill. Thomas G. Newman, Sec.
Dec. 5-6,	Michigan State, at Flint. H. D. Cutting, Sec., Union, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning Co., O., in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th. L. CARSON, Pres.

Michigan State Convention.

The 17th annual meeting of the Michigan State Bee-Keepers' Society, was held at Kalamazoo, Mich., on Dec. 6, 7, 1882, commencing Wednesday at 10:30 a. m., Vice President Southard, M. D., in the chair. There was a very fair attendance and those present indulged in a free and easy kind of a talk on various subjects, awaiting the arrival of the trains at about noon, which augmented the number quite considerably.

The chairman said that President Heddon was in favor of proceeding without a programme, leaving those present to suggest subjects which could be accepted or refused by vote of the convention.

Dr. Miller, of Marengo, Ill., said as president of the Northwestern convention he prepared a programme which covered all the points of interest, and was faithfully adhered to. He said that all wanted to know about some point, and he would suggest that slips of paper be handed around for the members to name subjects for discussion.

Dr. Southwick, A. C. Balch and others desired to have topics to be discussed arranged, and a committee was appointed consisting of Dr. Miller, Dr. Ranney, Dr. Southwick, and Mr. A. I. Root, to arrange a programme. Adjourned to 2 p. m.

The afternoon session was called to order by President Heddon, and the minutes of the last annual convention at Battle Creek was read and approved.

President Heddon said that the president's address was first in order but as he believed that discussion would be far better than an address, he would at once proceed to business.

The committee reported a "programme" which was adopted, and the convention proceeded to take up the first topic as follows:

How Shall We Begin to Keep Bees?

Dr. Southwick said he would look about and find the bees that produced the most honey.

Dr. Miller remarked that disaster might be occasioned by the location and not from the kind of bees. He bought his bees of Adam Grimm, who never had a large crop, on account of having a poor location. He had tried the Cyprians, but would not like to say which was best—the Cyprians or the Italians.

A. C. Balch wished to know if the best colony would duplicate itself in its progeny?

A. I. Root did not believe that queens would duplicate themselves.

Mr. Kazartee, of Cicero, said bee-keeping was like farming; one man would do well while others would fail. He had never tried the Cyprians, but believed that black bees made the whitest combs.

Prof. Cook introduced Mr. W. Z. Hutchinson, who had just arrived.

Dr. Miller remarked that he had lots of bare-headed bees, and asked, what shall I do? Pinch the queen's head or let them alone.

A. I. Root had seen such bees, but had noticed no difference in their work

A. C. Balch did not want the bees uncapped by moth millers. Black bees were troubled in this way more than Italians.

Prof. Cook said we should prove all things and hold fast to that which was good. He agreed perfectly with Mr. Geo. Thompson in his speech at the Chicago convention about the new races of bees. Such thoughts were valuable.

President Heddon would advise beginners to get the Italian bees—the light-colored ones are the most gentle, but the leather-colored ones were the best workers.

Prof. Cook: Like others, he would say, if there is a better bee he wanted it.

Dr. Miller could not discover any difference. His Syrians did not reach the average Italians.

The president said that good judges could not tell the difference between Cyprians and Italians; at least one did not when a bottle of Italians in alcohol was produced at the Cincinnati convention, for he said they were Cyprians.

Prof. Cook said Syrians were easily discerned—the queens of the Syrians had bars across the abdomen by which he could distinguish them very readily.

Secretary Bingham gave the Colvin test for pure Italians: that of placing the hand over an open hive of bees and with a sudden jerk, let it fall about 6 inches toward the frames. If the bees were pure Italians they would not be disturbed; if blacks or hybrids, they would at once commence an attack. He thought it a good test of Cyprians also. They would act like the hybrids.

A. I. Root said, at first he could not tell them apart at sight, but he could do so by the amount of brood and their dislike of jars; they were very irritable. The drones are much alike.

Prof. Cook: You can go close to the hive and the Syrians will not interfere with you, unless you molest them; but when thoroughly aroused they will follow you into the house, and even into a bedroom, so intent are they upon stinging.

A. C. Balch said that H. E. Bidwell obtained 216 lbs. of comb honey from one colony of Syrians.

President Heddon said that E. J. Oatman remarked at the Chicago convention that the honey produced by Syrian bees was of inferior quality.

Prof. Cook said he had not noticed that the honey capped by the Syrians was inferior, and would like to know more on that point.

The president said that Mr. Newman, editor of the AMERICAN BEE JOURNAL, had just come in, and, no doubt, he could give some light on the point as to the value of the honey produced by Syrian bees, in the Chicago market.

T. G. Newman, being called for, said that Mr. Oatman remarked something of the kind at the Chicago convention, and the best he could do would be to read it; as he happened to have a report of that convention in his pocket. He read as follows: "E. J. Oatman: We have found that the half-bloods (Syrians fertilized by Italian drones) gave us the most honey.

The quarter-bloods are no better than others; but these crosses are vicious. One colony of them, at the close of the white clover season, drove me out of the apiary, in spite of smoker, etc. I took them to an outside apiary and shall let them remain there till next spring, when I shall destroy them. They do not cap the honey so that it will look as nice and white as I want. When I put it on the market, it is worth from 2 to 5 cents per pound under price. The bees do not stay on the combs as well as Italians, either. Mr. Gray said that his neighbor, Mr. Miller, had 1,000 pounds of honey in the comb on Water street, and he could take any one and point out all the honey gathered and capped by the Syrians. He agreed with Mr. Oatman. President Miller asked: As they gather so fast, do you not obtain enough honey to more than counter-balance the loss in price? E. J. Oatman: No; it will not make up the loss in price when we market our honey. They are so cross that I do not want them at all."

Dr. Miller said that Mr. Oatman had sent a sample lot of honey to New York, and among it was some honey gathered by his Syrians, and the buyer said he would not take any more of that Syrian honey when he ordered another lot.

T. F. Bingham said he did not think it best to advise the introduction of untested and high-tempered bees.

Small Frames or Sections for Honey.

Mr. Newman said that bee-keeping was progressive, more so than any other pursuit. President Heddon said, at the Chicago convention, that "the ink of a book was hardly dry before the author was at work on a revision"—and it was true. We must keep abreast, if not in advance of the times. The requirements of the trade should be ascertained, and then beekeepers should supply the demand, whatever it may be. Only a short time ago the 2 lb. section was considered small—now, one holding one pound of honey was the most popular—and when Mr. Ripley, a member of the firm of Crocker & Blake, of Boston, was here, he said that Boston required a smaller section, holding only half a pound of honey. If that is to be the demand, we must supply it.

Dr. Southwick did not object to progress, but he did not think that the section should be smaller than two pounds.

Mr. St. John said that we must educate everybody to eat honey, and a small package was best.

H. D. Cutting said that small sections sold first, and not until they were all gone could you sell the larger ones.

President Heddon said that he had used the 2 lb. sections in one apiary, and the 1 lb. sections in the other, and could not see but the small ones were filled as quickly as the larger ones. He thought of using half pound sections next season, and would have the combs thinner, about the same thickness as brood combs.

T. F. Bingham said that thin combs were better for the table, cut out bet-

ter and made a better appearance on the plate. He recommended 1½ inches for the sections, and said that when thin foundation was used no separators would be necessary. The demands of the market must be met.

T. G. Newman said that honey was more healthy for the children than confectionery made with glucose; that Solomon knew what he was recommending to the children when he said, "My son, eat thou honey, because it is good." We must popularize the sale and use of honey by tempting the working man to take it home to his wife and children; they need sweets, and honey is the best and most healthy of all sweets for the consumption of humanity. When properly developed the market could not be overstocked with honey. All we had to do was to educate the masses to eat honey—to popularize it, and then the demand would be far greater than the supply.

H. D. Cutting said separators must be used if the sections are not filled with comb foundation.

Dr. Miller said variety was necessary, and if others made smaller sections, he should make larger.

Dr. Ranney: People do not buy the large sections of honey as quickly; nor as many of them as they do the small ones.

Mr. House said that he knew of a dealer in Chicago who had a lot of comb honey in half-pound sections, and he had sold it far more quickly than he could have sold one or two pound sections.

T. G. Newman remarked that he was not an advocate of half pound sections, but if they were used, they should have as large a surface as possible, because they would look more for the money, and the bees would work more readily on them, if they had more surface and less thickness of comb.

A. I. Root said that years ago we talked of a section for 25 cents, now we want one for 10 cents. If we make such they will sell readily. His wife wants the section so small that it is all eaten up at one meal. It is never so good to put back on the table the second time.

T. F. Bingham said that the extra thinness, by using 1½ inch sections, would render the use of separators comparatively unnecessary, as the bees did not often enlarge their combs so as to encroach on the next one, if they are only made of the thickness of the brood combs.

Side and Top Storing.

Mr. Balch had experienced no trouble with eggs in the sections when using sections in broad frames for side storing.

Dr. Miller is a side as well as top storer—uses a frame of brood to decoy the bees up to the sections. He wants to get them over as much ground as possible in the spring, and as little as possible at the end of the season. He had 174 colonies last spring and had only an increase of 28. His honey crop amounted to 16,549 pounds; all comb honey.

Adjourned.

EVENING SESSION.

The convention assembled at 7:30 p. m., President Heddon in the chair.

Dr. Miller was, on motion of Prof. Cook, made an honorary member.

The following committees were appointed:

On Resolutions—Prof. Cook, Dr. Southwick and R. L. Taylor.

On Exhibits—Dr. Haskins, W. Z. Hutchinson and Dr. Miller.

On Statistics—H. D. Cutting, Mr. Kazartee and Dr. O. B. Ranney.

The convention then proceeded to discuss the subject of

Overstocking a Locality.

President Heddon said bees would gather honey profitably about 3 miles, and it was useless to move bees less than 4 miles unless there existed a barrier of trees, rocks, hills, etc.

A. I. Root had 200 in one apiary, one year, when, in July, with clover in full bloom, the bees suddenly stopped gathering.

J. H. Robertson, of Pewamo, usually had 300 colonies in his home apiary, but he thought he was overstocked last year, for there was no honey to gather. He had seen his bees 7 miles away from the apiary.

James Heddon found that east of his apiary bees had not done as well as they had on the west. He was just at the edge of the honey shower.

Dr. Miller wanted to know how to get the greatest aggregate amount from 100 colonies of bees.

Dr. Ranney had tried to manage so as to prevent increase, and obtained much more than his neighbors did, by cutting out queen-cells.

Dr. Miller had kept 120 colonies down to 122.

Prof. Cook had visited D. A. Jones, of Canada, who had 1,000 colonies this year, but no honey, and was feeding them hundreds of barrels of sugar.

Clipping Queens' Wings.

Dr. Miller said that when a swarm comes out, I put back the bees and cage the queen (her wings being clipped she is easily secured). I let them remain 5 days and then cut out the queen-cells; 5 days later I cut out the queen-cells again and let the queen loose in the hive and they do not swarm again. This was usually sufficient to prevent swarming, but this year they came out again in spite of my precaution. The plan I have described is Mr. Doolittle's plan, and I have now practiced a plan of my own, which is as follows: I kill the queen and wait until "piping" is heard; then I cut out the other queen-cells, and take 4 brood frames and put in a super with the new queen and place this on the top of the honey board, leaving the lower hives queenless. Ten days after I cut out all the queen-cells and put the nucleus above, back in the lower story. This has been successful.

President Heddon said he did not believe in cutting the queen's wings; he did not like a part of a queen and did not believe the bees liked her any better than he did.

Prof. Cook could not consent to abandon the clipping of the queens' wings.

W. Z. Hutchinson said by using the extractor freely he could generally prevent swarming.

Mr. Southwick had no success in preventing swarming by cutting out queen-cells.

President Heddon hives the swarm on frames of wired foundation, let them work and after 5 days united them with the parent colony.

Mr. Swarthout hives the bees in a new hive, all but a few which he returns to the parent colony and puts in a young laying queen, and finds that this usually prevents swarming.

Mr. Townsend said that bees did not like to build comb when they were queenless.

Prof. Cook remarked that many extensive bee-keepers thought it profitable to clip the wings of their queens, and for himself he did not see how any one could afford not to do so.

Dr. Miller did not think he could keep bees successfully without clipping the queens' wings.

Adjourned.

SECOND DAY.

The convention met at 9 a. m., and Mr. Cutting, chairman of the committee on obtaining a suitable place for exhibits at the State Fair and obtaining a good list of premiums, reported by request. The report was unanimously received and \$20 were allowed for expenses and an order on the treasury for the amount was drawn.

Mr. Cutting said that the State Fair officers were so well pleased with the honey exhibit that they would do any thing reasonable to encourage the bee-keeping interest for the coming year.

Prof. Cook said that we could not do anything that would go farther to popularize honey consumption than to make a large display at the State Fair, and have it sold on the ground, and Mr. Cutting had done his work so well that he would move a vote of thanks to him for the way in which he had managed the exhibit and secured the approbation of the officers of the State Fair.

The election of officers for the ensuing year was then had, with the following result:

President—Prof. A. J. Cook.

Vice Presidents—Dr. A. S. Haskins and W. Z. Hutchinson.

Secretary—H. D. Cutting.

Treasurer—T. M. Cobb.

The secretary's expense account was presented, amounting to \$18.47 and ordered paid.

Flint was selected as the place for holding the next annual session, on the first Wednesday after the first Tuesday in December, 1883.

Secretary Bingham was requested to continue his duties during the present session.

President Cook was then conducted to the chair by Mr. T. G. Newman and Dr. Haskins and welcomed by President Heddon.

Discussion was then resumed, and

the next subject on the programme taken up, viz.:

Wintering Bees.

W. Z. Hutchinson wintered his bees in a cellar, ventilated by a pipe running underground. With this ventilating pipe the air was kept pure and odorless, and the bees wintered well.

Mr. St. John said that spring dwindling was caused by the bees taking cold and they died of pneumonia.

R. L. Taylor used chaff cushions on each side of the hives, for winter, and was successful.

Mr. Kezartee kept his bees dry with absorbents and they wintered well.

Dr. Ranney packed with 4 inches of chaff and allows no escape of air from the inner hive. He packed the chaff over the cover and around the hive, and they wintered well.

Dr. Southwick uses chaff cushions; the top cushions never get damp if there is an air-space between them and the outside boards. He took off the packing when the apple trees bloomed, and kept the bees from breeding as late as possible.

Dr. Southard found that if any cover of the inside hive, as described by Dr. Ranney, got displaced, the bees in that hive had the dysentery if the winter was very cold.

James Heddon said he could demonstrate that dysentery was not produced by lack of upward ventilation. Cold is not the cause but the aggravation of the disease. He had the best results in packing bees on the summer stands.

Mr. Robertson wintered his bees in a cellar, piled 8 high; water run through the cellar and carried off the gasses, and winters successfully.

Prof. Cook remarked that water in a cellar was a valuable thing. He had a brother who has a cistern in his cellar where his bees are put, and they winter well.

Adjourned.

AFTERNOON SESSION.

President Cook called the convention to order at 1:30 p. m., and the subject of wintering was further discussed.

Dr. Southard weighs all his hives before putting into winter quarters; takes out all poor honey and gives them 25 pounds each to winter on.

James Heddon wanted boxes on for winter, and said, dark honey, if thick, was best for winter.

Comb Foundation.

Dr. Miller liked the Given foundation best.

Dr. Southwick also liked it best.

A. I. Root said rubber plates make the softest foundation, and bees work on it very promptly; next to that was the Given. He used wire woven in the frames and embedded in the foundation.

James Heddon: It pays a good profit to make foundation, and when a man has 50 colonies it will pay him to own a machine or press.

Mr. Taylor likes the Given best; he could put combs in with the press easier than he could fasten other kinds in the frames. Damp days were best for making foundation.

The Committee on Statistics made the following report:

Apiarists.	Number of Colonies in spring.	Number of Colonies in fall.	Comb Honey, lbs.	Extracted Honey, lbs.	Beeswax, lbs.
1	110	140	....	3,000	..
2	185	185	....	....	..
3	28	36	1,500	1,500	28
4	175	280	6,000	5,000	..
5	6	17	50	650	5
6	3	27	32	72	..
7	30	80	600	100	..
8	19	40	200	1,000	..
9	16	30	200	500	..
10	60	70	400	2,600	..
11	80	75	50	500	..
12	3	12	170	80	..
13	40	64	1,150	150	..
14	17	46	1,513	....	..
15	5	7	20	300	..
16	75	135	2,000	2,000	..
17	50	110	300	4,100	..
18	26	46	....	276	..
19	55	107	....	3,200	..
20	16	45	100	....	24
21	36	70	700	300	..
22	52	78	....	1,040	..
23	4	19	200	50	..
24	4	17	300	....	..
25	25	100	....	900	..
26	14	32	2,000	1,000	..
27	15	21	58	108	..
28	24	37	1,325	50	..
29	38	81	950	400	..
30	25	65	....	1,200	..
31	50	75	....	600	..
Total	1,284	2,147	19,818	30,676	54

The reports given, show an increase of 863 colonies, or about two-thirds of the spring number.

The wax was included in the report of but three persons, while one or two reported a good business in the rearing and sale of queens.

Respectfully submitted,

H. D. CUTTING,
O. B. RANNEY.

The report was accepted and the committee discharged.

T. F. Bingham gave the result of his experiments with the cappings. When converted into wax, it took 60 lbs. of cappings to make 30 lbs. of wax, or about 10 lbs. of wax from the uncapping of 3,000 lbs. of sealed honey.

Pasturage for Bees.

Dr. Miller has sowed sweet clover in buckwheat, and should sow it again next year so as to have a continuous crop.

Julius Tomlinson had sweet clover near his foundry and it had re-seeded itself for 10 years and grew thicker; had sowed some about trees, but very little came up.

Dr. Miller said he would sow a few acres of sweet clover if he was sure it would pay as a honey plant or otherwise.

Prof. Cook said it would grow well on sandy soil.

Dr. Miller said that a farmer in Wisconsin had found sweet clover of value as feed for cows.

Julius Tomlinson said his cows would eat it.

J. H. Robertson said figwort was always sought after by bees, while sweet clover was sometimes neglected by them. His sweet clover grew on clay soil. Alsike clover was his pet pasturage for bees.

Dr. Miller: It failed to grow on my soil.

Dr. Southwick sowed alsike with other clovers and it did better than when sowed alone; it made better hay. He should sow 13 acres next spring with timothy, for bee pasturage and hay.

Julius Tomlinson thought it would pay to give seed to farmers.

A. I. Root had great faith in alsike; it should be cut just as it began to bloom, in order to get the best results in a honey crop, at the season when it is needed, just after basswood and clover.

Dr. Southard said he sowed sweet clover and his man cut it with the oats, but some of it grew and the bees worked on it till fall.

James Heddon said bees do not get honey from plants that bloom out of season.

Prof. Cook: Rape will prove to be a good honey plant; sow it 4 weeks before you want it to bloom.

Mr. Townsend: No honey plant will yield honey under all conditions.

Dr. Ranney: Buckwheat will yield honey only now and then; not every year.

Prof. Cook: Texas horsemint is not the same as our bergamot.

Adjourned.

T. F. BINGHAM, Sec.

The Nebraska State Bee-Keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-Keepers' Association will furnish entertainment free to all visiting apiarists. Bee-keepers from neighboring States will be welcomed.

T. L. VONDORN, Pres.

GEO. M. HAWLEY, Sec.

The Ohio State Bee-Keepers' Association will meet in Columbus, in the rooms of the *Ohio State Journal*, on Tuesday and Wednesday, Jan. 9 and 10, 1883. A full attendance of members, and all interested in bee-culture, is requested, as matters of interest and importance will be discussed.

Dr. H. BESSE, Delaware, O., Pres.
DANIEL SPEAR, Cardington, O., Sec.

The annual meeting of the Cortland Union Bee-keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 9, 1883.

M. C. BEAN, Sec.

McGrawville, N. Y.

Read at Maine State Convention.

Wintering and Springing of Bees.

O. L. SAWYER.

The successful wintering and springing of bees is a subject of vast importance to every bee-keeper. While one comes out in the spring with flying colors, his neighbor meets with heavy losses. One may winter one season with good results, the next winter his bees may come out in bad shape. As we never have two winters or two seasons exactly alike, it is quite difficult for one rule to apply to the various conditions in which bees are kept.

The causes of bees not wintering well are numerous and great. In the last fourteen years, during which I have been keeping bees, my experience has been of a decidedly mixed nature. Not having a first-class cellar I have tried various ways, some winters meeting with good success, and at other times coming out in bad shape. It has been my experience that there are some colonies that it is almost impossible to winter. One season I attempted to winter two colonies of Italians; one came out the 29th of July, the other the 20th of August. They both gathered sufficient stores to carry them through the winter, but in less than ten days after I had put them in my building they became quite uneasy and began to have a very bad smell. I gave them more ventilation, but it did no good; and at last I set them out doors, the temperature being below zero, hoping to quiet them down, if nothing more. But it had but little effect and in a few days they were dead. I think that there might have been disease or poor honey that caused it. I kept the hives and comb till the next year, putting new swarms in them, and they wintered as well as any that I had. The cause of this queer freak I never could give any reason for, excepting that it is something a little natural to the Italian bees, having had several such cases in a light form.

A great many attempt to winter colonies that are perfectly unfit to stand the test of our long and cold winters, starting with too few bees or without sufficient stores. Last winter I attempted to winter some fifteen colonies, that came out in August, they having quite enough to carry them through, but the honey was on more frames than it should have been. I put them in the cellar and they did as well as any of my strong ones until about the 1st of March. At that time they had eaten the honey out of the combs on which they clustered. Then came the trouble. As soon as they had to change their position for stores they would sicken and die. The placing of comb honey on the frames over them seemed to have no good effect. Had I succeeded in getting them safely through the winter it would have been impossible to have carried them through such a spring as our last. Bees to winter and do well the next season, should first have a young and healthy queen, with a plenty of bees not too old. Second, twenty to

thirty pounds of nice honey or sugar syrup. This must not be scattered through the hive, but must be as nearly in one solid mass above the bees as possible.

A great many bees die in the spring by getting away from their stores. This fall, while traveling in Aroostook county, I found men who had had varied success. G. W. P. Jerrard, of Caribou, told me that he could keep his bees in the cellar six months, and bring them out in good shape in the spring; having lost scarcely any last winter of his one hundred and thirty; while Mr. Oliver Ames, of Fort Fairfield, having one of the finest cellars that I ever saw, lost fifty out of ninety colonies, last winter or spring. Other men have wintered bees well in the cellar, but such a spring as our last was a hard one to get by.

Not having a cellar satisfactory to my mind in which to winter fifty colonies, some six years ago, I put up a building for the purpose, having it nicely ventilated, with the walls thick enough to keep the bees at a proper temperature. It seemed as if this was all one could wish for, but while I could winter fifty colonies successfully one year, the next I would lose a greater portion of them; and those that came out well, would dwindle away in the spring. This having been unsatisfactory, I have, in the meantime, packed a few on their summer stands, with better results; it seeming to be more natural, and the long, cold springs not having so much effect on them as those wintered indoors.

My manner of packing is to build up around them on three sides, leaving the front open, exposed to the sun. I fill in on the three sides with leaves or planer shavings, covering the top the same as the sides. I then shingle the roof and all is done until next June; the time I consider that winter has ended. I shall winter the most of my bees as above stated this season.

The annual meeting of the Champlain Valley Bee-Keepers' Association will be held at Middleburg, Vt., on Thursday, January 18, 1883, at 10 a. m.

T. BROOKINS, Sec.

The North Eastern Bee-Keepers' Association will hold their thirteenth Annual Convention in the City Hall, at Syracuse, N. Y., on the 9th, 10th and 11th days of January, 1883.

Business of great value to every bee-keeper in the State will be brought before the meeting. Every member is requested to attend and bring their friends, that all may be benefited by the action there taken.

The question drawer will be opened each day, and questions answered and discussed. All are invited to send questions. Appropriate diplomas will be awarded to successful exhibitors of implements, etc. Let all attend.

GEO. W. HOUSE, Sec.

Attention is called to our new and liberal advertising rates for 1883.

SELECTIONS FROM OUR LETTER BOX

Facts About Bees.—A knowledge of some facts familiar to bee-hunters will aid any one who may propose to repeat Sir J. Lubbock's experiments quoted on page 738 of the last number of the BEE JOURNAL. Bees cannot be induced to work freely on honey when honey-bearing flowers are in bloom. A single bee may continue for hours to carry to the hive the honey it has found and finally stop without having any companions. The case is very different after frosts have ended the natural honey harvest. Then, if on a bright, warm day a stray bee can be caught ranging the fields and allowed to quietly fill itself with honey and depart without alarm, by the time it has made a second return, if not before, it is almost sure to be accompanied or preceded by other bees, even if the hive is a mile or two away. I presume the experiment might also be made successfully in warm days of early spring. It is the opinion of many who have hunted wild bees that bees do find their way from the hive to the honey without accompanying a bee who knows the way, but I have never observed any fact to positively sustain the theory and it is very improbable.

W. BRADFORD.

Louisville, N. Y.

[Sir John Lubbock's experiments were made in England, where bee pasturage is very limited and can not be compared to that found in America. Some of his experiments were no doubt made when the honey harvest was in its height, and this may have given an erroneous conclusion to some of his experiments. But his book is very interesting to the student.—ED.]

Good!—From 16 colonies, spring count, I took 1,710 lbs. of comb honey in 1 pound sections. Long life to the BEE JOURNAL. I hope you will never come in contact with my "Coming Bees."

JAMES RONIAN.

Villisca, Iowa, Dec. 1, 1882.

Lime for Wintering.—I have just read the article by F. Della Torre, in No. 46 of the BEE JOURNAL, and agree with him, although I have no acquaintance with the gentleman. I am surprised that others do not see the advantages lime presents over all other *modus operandi*. I have read, in the BEE JOURNAL, all the methods of wintering that have been published, and his is the first mention of the true method. The lime cushion can be applied to almost any hive, either under, over, or at the side, effectively. It is a common sense and scientific protection. It absorbs all the moisture and gives some heat. Mr. S. Corneil sounds the key note as to the cause of dysentery, when he says in the BEE JOURNAL, No. 46, page 728, "that bees, when clustered, can endure se-

vere cold, but cannot stand dampness." It is plain that if the air, heated by the bees, be overloaded with moisture, the large amount of water generated by the consumption of honey will not be inhaled by evaporation from the respiratory membrane, but will remain in the bees bodies, and if this condition of the air be long continued, it is sufficient cause of dysentery. I only have 12 colonies, but I am as desirous of saving them through the winter as though I had a thousand. I have no axe to grind and give my opinion for what it is worth, as I have used the lime and know whereof I speak.

DR. J. C. OLDHAM.

Springfield, O., Dec. 3, 1882.

Poor Honey for Winter Use.—Having 8 colonies of bees which have not swarmed the past season (and I can not hear of one which has in this vicinity), and none of the bee-keepers here have obtained more than 10 lbs. of comb honey (and some none) and that very dark and slightly offensive, last spring being very cold and the summer the driest we ever experienced, I write to inquire if their store of honey is judged safe for their winter food? If not, should it be taken from them or may sugar be fed to them and let them take their choice? I have packed them so heavily in dry sawdust as to require nearly two feet of inlet which is 1x3 inches. Is the length objectionable?

L. H. MERRITT.

Hartland, Vt., Nov., 1882.

[The honey may or may not be safe winter feed—we cannot tell unless we knew more of its quality. Sugar would be safe, if made into a syrup, as often stated in the BEE JOURNAL. There is nothing objectionable about a passage way of even 2 feet for bees entering a hive, except the time taken to travel it. We have seen several as long or even longer in observatory hives at Fairs. We fear you have wasted packing-boards in using so liberal an amount of sawdust.—ED.]

Old Foggy Bee-Keepers.—I have 50 colonies of Italian bees; my neighbor has about the same number with the exception there is very few Italian bees within several miles. We are greatly annoyed with old foggy bee-keepers who will not Italianize or even transfer to movable frames or take a bee paper of any kind. Let me give an instance of this. One of these (an old neighbor of mine) who boasts of having kept bees for 30 years, and who has heretofore stated that he knew all about bees that is to be known. In conversation with him a few days ago in relation to queen-rearing and cell-building, he asked me how they got the eggs from the queen to make the queen cells, and when I informed him how it was done, he said, "oh, yes, that would do; I thought they had to take them out of the queen," evidently thinking the best queen in the apiary had to be sacrificed to get a few eggs. This is too good a joke to be lost; let us have it in the BEE JOUR-

NAL for the benefit of others who think "what they don't know is not worth knowing," and as a sample of the gross ignorance and innocence of "old fogies."

HENRY LARGE.

Whigville, O., Nov. 20, 1882.

My Report.—I commenced in the spring with 100 colonies; increased to 173 by natural swarming. I obtained 15,000 lbs. of comb honey and 500 lbs. of extracted. I now have 170 colonies in winter quarters, with plenty of honey and bees. I winter in a cellar and bee-house.

H. F. PUTNAM.

Galesburg, Ill., Dec. 4, 1882.

Poor Honey Season.—We had a poor season here for honey. From 30 colonies in spring, I received 500 lbs. of comb honey and 400 of extracted, besides 90 swarms and nuclei.

Holt, Mich. JOHN L. DAVIS.

Snow, and Upward Ventilation.—Will it be detrimental to bees to have snow drift over the entrance? When the hives are packed with chaff, on the top, must I keep more top ventilation when the thermometer is below zero, than when it is 40 degrees above?

Nineveh, Ind. W. D. SMYSER.

[Snow is not detrimental, if it is not permitted to thaw and freeze and run down over and close up the entrance. If a board is slanted over the front, to protect the entrance, the snow is a protection against the cold.

The chaff packing will give sufficient ventilation at any time in winter; it should not touch the outer cover, however, or it may become frozen in severe weather. An air space, above the chaff, is an advantage in keeping out the cold as well as allowing the moisture to escape, leaving the chaff-packing dry. Too much ventilation is conducive to dysentery. The heat should not be allowed to escape from the cluster.—ED.]

Spring Dwindling.—Last spring I had 64 colonies of bees, all in good condition, which dwindled down until I had only 48 left. On May 24th they were in good condition at which time I first noticed drones. A cold storm, June 7-9, came on and killed all the drones; all the stores were exhausted and there was nothing coming in from the fields. About Sept. 1, they began to gain. I had but two natural swarms, one of which got away. I have increased by artificial swarming to 66, but have only obtained about 300 lbs. of comb honey and 400 of extracted.

J. G. A. WALLACE.

Brighton, Ont.

A, No. 1.—I have found the AMERICAN BEE JOURNAL to be "A, No. 1," as an advertising medium, and I shall, of course, advertise, during the coming year, in both the Weekly and Monthly editions.

E. T. FLANAGAN.

Belleville, Ill., Nov. 27, 1882.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES for 1883.

20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain about 8 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance.

Editorial Notices, 50 cents per line.

SPECIAL RATES.—Advertisements will be inserted in both Weekly and Monthly editions, at the following prices, if wholly paid in advance:

SPACE.	One month	Two mo'ths	Three mo'ths	Six mo'ths	One Year.
1 in. 12 lines	10.00	18.00	25.00	38.00	50.00
2 in. 24 lines	20.00	32.00	40.00	60.00	80.00
3 in. 36 lines	25.00	40.00	50.00	75.00	100.00
4 in. 48 lines	32.00	50.00	65.00	90.00	125.00
5 in. 60 lines	40.00	60.00	75.00	110.00	150.00
6 in. 72 lines	45.00	70.00	90.00	130.00	175.00

For the Weekly alone, 20 per cent. less than the above rates. On yearly advertisements, payments may be made quarterly, but must be in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN.

925 West Madison Street., Chicago, Ill.

Special Notices.

A few of our subscribers are in arrears for the present year—having requested us to continue, and they would pay soon. Will all such please take this as a request to send on the two dollars with a renewal for next year, if possible.

The American Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for \$1 to \$5 are 5 cents; over \$5 to \$10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

New Premiums for 1883.

As the season for reading has now arrived, we hope that each of our subscribers will endeavor to send at least one new subscriber for the Weekly BEE JOURNAL for 1883 and thus not only help on the cause of progressive bee-culture, but assist in sustaining the only Weekly bee paper in the world.

Providence has smiled on the beekeepers during the past season, and as a general thing they are abundantly able to procure a good assortment of bee-literature.

In order to encourage every one who keeps bees, be they few or many colonies, to thoroughly read the many very interesting books on bee-culture, now published, we have determined to make liberal offers, which will be available until January 1, 1883, as follows:

To any one sending us \$8 for any books they may select from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for one year.

To any one purchasing \$4 worth of books, selected from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for six months or the Monthly for one year.

Any one sending us a club of two subscribers for 1883, for the Weekly, with \$4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with \$6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with \$8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with \$10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for \$3.00; or with King's Text-Book, in cloth, for \$2.75; or with Bees and Honey, in cloth, \$2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at \$1.00 a year, in advance; 2 copies for \$1.80; 3 copies for \$2.50; 5 copies for \$4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers. The Weekly will contain all that the Monthly does, besides twice as much other matter.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus: Those who have paid for the first six months of next year will find "June 83" after their names. Those who have paid for the whole year will find "Dec. 83" on their papers. The credit runs to the end of the month indicated. If the mark is "Dec. 82," it means that the subscription is paid until the end of the present year. Please remember that the credit given on this label is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subscribers will give this matter due attention.

The time for the usual winter rush of correspondence is here, and we wish to impress upon all our patrons the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address that we already have on our books.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages).....\$1 00
 " 100 colonies (220 pages)..... 1 50
 " 200 colonies (420 pages)..... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

The BEE JOURNAL is mailed at the Chicago post office every Tuesday, and any irregularity in its arrival is due to the postal employees, or some cause beyond our control.

Articles for publication must be written on a separate piece of paper from items of business.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
 Monday, 10 a. m., December 11, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.**CHICAGO.**

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 7c. for dark and 9c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17c@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—Demand is good for extracted honey by the barrel for manufacturing purposes and for table use. The demand is very good for honey in 1@2 lb. jars. A good deal of comb honey could be sold if we had a good article at a rate within the views of the consumer; 4 c., which could be sold at 2 1/2 c. in the jobbing way and 25c. at retail.

We pay 7c@10c. for extracted, and 16c@20c. for good comb honey in sections.
 BEESWAX—Is in good demand at 20c@27c. per lb. on arrival.

CHAS. F. MUTH.

Quotations of Commission Merchants.**CHICAGO.**

HONEY—The demand for comb honey does not keep pace with the receipts. There is a large surplus on this market at present, and prices are from 2 to 3c. lower than last month.

We quote: white comb honey, in 1@2 lb. sections, 17c@18c. Dark comb honey, hardly any demand. It is held at 12 1/2c@15c. Extracted—White brings from 9c@10c.; dark, 8c@9c.; kegs, half-barrels and casks bring about same price.

BEESWAX—Choice Yellow, 30c.; dark to medium, 18c@25c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—A sailing vessel this week took 1,018 cases for Liverpool from a packing house. The market is quiet. Such qualities as are in good supply, dark and medium, are in poor demand.

White comb, 18c@20c.; dark to good, 12c@15c.; extracted, choice to extra white, 9c@10c.; dark and candied, 7c@8 1/2c.

BEESWAX—We quote 25c@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dark Comb, at 16c. for large or hard to 18c@20c. for choice bright small packings; extracted at 8c@9c.; strained, 6 1/2c@7c.; choice, in smaller quantities, brings more.

BEESWAX—Prime bright steady at 26c@27c.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—There has been no change in honey the past week. No. 1 white, in 1 lb. sections, continues in good demand at 21c@22c. per pound. No. 1 in 2 lb. sections, is also in good request at 19c@20c. Second grade, less active, at 16c@20c. per lb. less. Extracted, in all shapes, was dull and very little sale. Some Louisiana honey, rather dark, in barrels, was sold at 9c.

BEESWAX—Prime quality, 25c@28c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is a fair demand, but mostly for small lots, and the general tone of prices remain steady.

We quote: White clover, first quality, 1 lb. boxes, 25c.; 2 lb. boxes, 23c@25c.; second quality, 20c.; buckwheat, 1 lb. boxes, 21c.; 2 lb. boxes, 16c.

BEESWAX—30c@32c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: 1/4 lb. sections at 30c.; 1 lb. sections, 22c@25c.; 2 lb. sections, 20c@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—30c.

CROCKER & BLAKE, 57 Chatham Street.

Sample Copies of the AMERICAN BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to new Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, \$4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

CLUBBING LIST.

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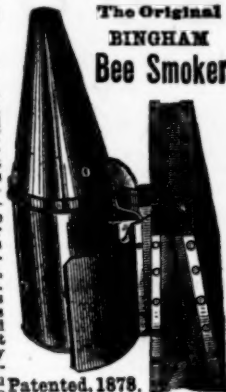
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